BY ORDER OF THE COMMANDER
HOLLOMAN AIR FORCE BASE (ACC)

HOLLOMAN AIR FORCE BASE
INSTRUCTION

15-101

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Weather

WEATHER SUPPORT PROCEDURES

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This instruction implements AFI 10-206, *Operational Reporting*, 13 April 2015; AFI 10-2501, *Air Force Emergency Management (EM) Program Planning and Operations*, 19 April 2016; AFI 11-202v3, *General Flight Rules*, 07 November 2014; ACCSUP 1, General Flight Rules, 28 November 2012; AFI 15-128 ACCSUP 1, *Air and Space Weather Operations - Roles and Responsibilities*, 17 December 2012; AFI 48-151, *Thermal Injury*, 18 November 2002; AFI 91-203 ACCSUP, *Air Force Consolidated Occupational Safety Instruction*, 27 March 2014; AFMAN 15-111, *Surface Weather Observations*, 27 February 2013; AFMAN 15-124, *Meteorological Codes*, 28 February 2013; AFMAN 15-129 Volume 1, *Air and Space Weather Operations - Characterization*, 6 December 2011; AFMAN 15-129 Volume 2 ACCSUP, *Air and Space Weather Operations – Exploitation*, 15 February 2015; AFMAN 33-363, *Management of Records*, 01 March 2008; AFMAN 91-201, *Explosives Safety Standards*, 12 January 2011; AFPD 15-1, *Air Force Weather Operations*, 12 November 2015. It establishes the responsibilities and procedures for providing and using weather services at Holloman AFB (HAFB). It provides general information on weather services including weather observations and forecasts, weather warnings and advisories, dissemination of weather information, and reciprocal support. It applies to all 49 WG agencies and tenant units described herein. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Manual 33-363, *Management of Records*, and disposed of in accordance with Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS) located at **https://www.my.af.mil/afrims/afrims/afrims/rims.cfm**.

Contact supporting records managers as required. Refer recommended changes and questions to the Office of Primary Responsibility (OPR) using AF Form 847, *Recommendation for Change of Publication*, to 49th Operations Support Squadron Weather Flight (49 OSS/OSW), 1148 Rescue Road, Holloman AFB, New Mexico 88330-8029.

SUMMARY OF CHANGES

This document has been completely revised. The chapters contain information on overarching weather principles and weather characterization for Holloman AFB. Guidance specific to the unique operations of weather support will be maintained in the 15 series publications.

Chapter 1

GENERAL INFORMATION

1.1. Overview.

1.1.1. The 25th Operational Weather Squadron (25 OWS) and 49th Operations Support Squadron Exploitation Unit or Weather Flight (WF) (49 OSS/OSW), herein referred to as the WF, are the official weather information agencies for, and provide weather services to, the 49th Wing (49 WG) and tenant units assigned to Holloman AFB, New Mexico. Basic concepts and procedures are outlined in the 15-series Air Force and Air Combat Command directives and further specified on the Holloman AFB Installation Data Page (IDP).

1.1.2. This instruction establishes requirements and procedures for weather support, which must be coordinated at the local level to meet mission needs. It consolidates weather support requirements and procedures for peacetime operations and eliminates the need for written agreements between the WF and supported units/operations. It does not cover weather support procedures for emergency war operations or certain other special operations and procedures. These are covered in applicable plans and regulations.

1.2. Weather Operations.

1.2.1. The 25 OWS at Davis-Monthan AFB, Arizona provides regional and operational-level weather products and information to Air Force and Army units operating in the western CONUS. The 25 OWS provides resource protection (by issuing weather warnings, watches, and advisories), Terminal Aerodrome Forecasts (TAFs), regional and operational-level weather products and information, meteorological watch (METWATCH), limited flight weather (DD Form 175-1, *Flight Weather Briefing*) support, and verbal weather briefings.

1.2.2. The WF will focus on providing tactical-level weather products and information needed for routine mission execution and support to the commander during wartime, contingency, and exercise operations. The WF provides the Mission Execution Forecast (MEF), base resource protection, and deployment weather information to the 49 WG and tenant units. Primary weather support for transient aircrews will be provided by 25 OWS. The WF may provide transient aircrew support during duty-hours as time permits.

1.3. Assumptions. Adequate resources and communications will be available to execute this instruction and sufficient weather data will be available from various sources on which to base weather operations and production.

1.4. Identifiers, Station Information, and Designators. To maintain current and valid information, all Holloman AFB Identifiers and Designators will be referenced in Department of Defense (DoD) Flight Information Publications/Handbooks and World Meteorological Organization (WMO) designations.

1.5. Duty Priorities. Not all WF tasks can be accomplished simultaneously. Therefore, duty priorities are established to ensure tasks are accomplished in order of importance and publicized to avoid misunderstanding among supported agencies. Duty priorities will ensure timely response to situations under normal conditions. However, the list will not replace situational awareness, mission necessity and sound judgment. The weather technician may deviate in the

best interests of flight safety and/or protection of personnel or property. The weather technician will use the following priority list as a guide for accomplishing duties.

1.5.1. Perform Emergency War Order Taskings.

1.5.2. Perform Facility Evacuation Procedures.

1.5.3. Respond to Aircraft/Ground Emergencies.

1.5.4. Respond to and Provide Airborne Aircrew Support through Pilot-to-Metro Services (PMSV).

1.5.5. Provide Weather Information for Supervisor of Flying (SOF).

1.5.6. Conduct Severe Weather Action Procedure (SWAP) Operations.

1.5.7. Disseminate mission critical Weather Watches, Warnings, and Advisories (WWA). Record and Disseminate Augmented Airfield Weather Observations to include additional and mandatory supplementation criteria for the FMQ-19. The forecaster will determine which task is to be accomplished first based on the mission and weather phenomena occurring.

1.5.8. Provide 'Eyes Forward' and Collaborate with 25 OWS.

1.5.9. Produce and Disseminate Mission Execution Forecasts (MEF).

1.5.10. Disseminate Urgent/Routine Pilot Reports (PIREPs) and Special Air Reports (AIREPs).

1.5.11. Perform METWATCH and MISSIONWATCH Activities.

1.5.12. Provide Transient Aircrew (175-1) and Other Weather Support Briefings.

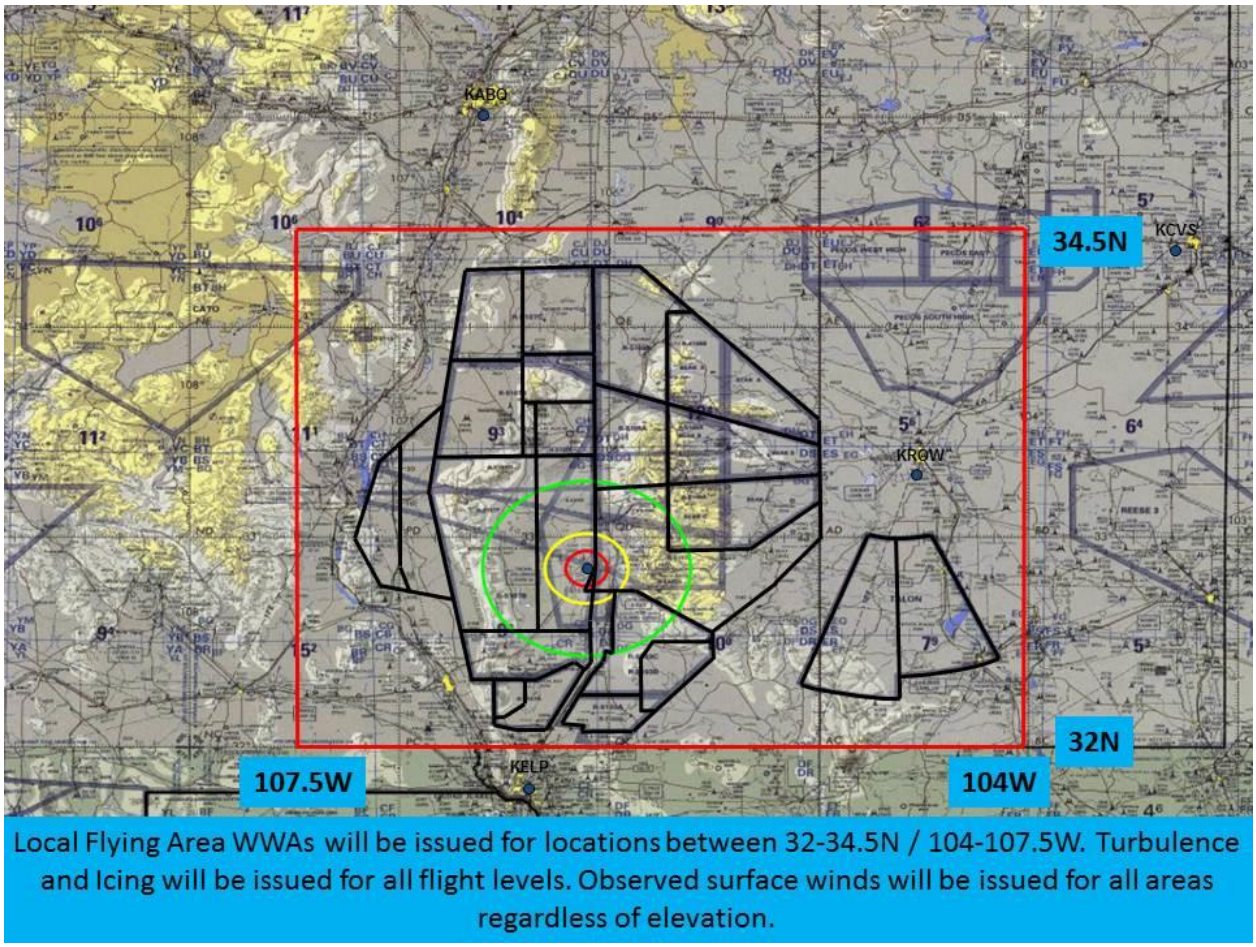
1.5.13. Accomplish Weather Functional Training.

1.5.14. Accomplish Administrative and Additional Duty Tasks.

1.6. Geographic Area of Responsibility. The area of responsibility for products and services provided by the WF is the area located within a 5 NM radius of Holloman AFB. The WF will also produce a MEF and MISSIONWATCH for all areas and routes in which 49 WG and tenant flying units are conducting operations.

1.7. Local Flying Area. For the purposes of products and services related to the "Local Flying Area", Figure 1 below will be used:

Figure 1.1. Local Flying Area.



1.8. Operating Hours and Contact Information.

1.8.1. Staff services are available from 0730 local time to 1630, Monday through Friday, except federal holidays, ACC family days, and 49 WG "down-days."

1.8.2. Weather technicians are available to provide services at Holloman AFB during airfield operations. A technician will be on duty, as required, prior to scheduled missions in order to prepare and disseminate MEFs.

1.8.3. The 25 OWS provides 24/7 weather support to Holloman AFB and transient aircrews. It becomes the primary weather support agency when the WF is closed.

1.8.4. During non-duty hours there is one WF member on standby to receive weather information from the 25 OWS via Command Post to determine if the Severe Weather Management Team (SWMT) needs to be activated, and to respond to urgent requests or troubleshoot meteorological equipment.

1.8.5. The WF can be contacted at DSN 572-3924/3925 or Commercial (575) 572-3924/3925. The standby person can be contacted at Commercial (575) 430-2024. If a forecaster can't be reached by the previous numbers, contact can also be made through the Command Post DSN 572-7575 or Commercial (575) 572-7575. The 25 OWS can be contacted at DSN 228-7653, Commercial (520) 228-7653.

1.9. Joint Environmental Toolkit (JET). JET is the primary weather data dissemination system on Holloman AFB. All required agencies will have access to the JET portal and running at all times, so they automatically receive weather updates as they occur.

1.9.1. Air Traffic Control (ATC) Tower and Radar Approach Control (RAPCON) use the Airfield Advisory System as the primary weather data dissemination system.

1.10. Base Weather Station Evacuation. If the WF is required to evacuate the base weather station (Building 577 at 1148 Rescue Road), the team will relocate to the Alternate Operating Location (AOL), in building 318. The WF can be contacted at DSN 572-2794/2762 or Commercial (575) 572-2794/2762 at the AOL.

1.10.1. The 25 OWS will assume the following duties until the WF resumes operations:

1.10.1.1. Perform METWATCH and MISSIONWATCH for 49 WG and tenant unit operations and issue all terminal and flying area weather warnings and advisories to the best of their ability. Since the 25 OWS is geographically separated and is limited to cloud-to-ground lightning strike data, it does not have the capability to detect or observe other lightning strike occurrences (e.g., cloud-to-cloud lightning).

1.10.1.2. Produce and update the flight weather support for the 49 WG and tenant units in accordance with AFI 15-128.

1.10.1.3. Assume responsibility for all other flight weather briefings for missions departing Holloman AFB and conduct limited MISSIONWATCH for these flights.

1.10.2. Upon arrival at the AOL, the WF will stand up operations and notify the 25 OWS, ATC, RAPCON, Command Post, and all Holloman AFB flying units that the WF has resumed operations at the AOL.

1.10.3. The weather technician will provide the following services from the AOL:

1.10.3.1. If the FMQ-19 is operative and there is no break in the automated observation report then no manual observation will be taken. If the FMQ-19 is inoperative a manual observation will be taken within 15 minutes of arriving at the AOL. It will contain, at a minimum, prevailing visibility, present weather and obscurations, sky condition, wind direction and speed, temperature, dew point, and altimeter setting. Weather elements included in surface weather observations will be obtained using the Kestrel or TMQ-53 until the primary system is back online. Surface weather observations will be disseminated using primary dissemination methods (JET). If primary dissemination methods are not available, observations will be disseminated using back-up procedures on the Air Force Weather Web Services (AFW-WEBS) or through the 25 OWS.

1.10.3.2. Continue to issue and update MEFs if the capability exists. The MEF will continue to be updated on the WF webpage if possible (SharePoint: **https://holloman.eim.acc.hedc.af.mil/Weather/default.aspx**). If the webpage is inaccessible, the MEF will be faxed or emailed to the flying units.

1.10.3.3. Provide METWATCH for Holloman AFB from the AOL. Forecast weather warnings, watches, and advisories will be disseminated by the 25 OWS or by phone or fax if JET is non-operational.

1.10.3.4. Brief aircrews and MISSIONWATCH.

1.11. Backup Weather Support. If weather operations at the 25 OWS are interrupted (e.g., power outage, natural disaster), the 25 OWS will contact the WF and transfer responsibility for the Holloman AFB Terminal Aerodrome Forecast (TAF) and all Holloman AFB WWA until the 25 OWS is postured to resume operations. Responsibility for other 25 OWS products (e.g., graphical products) will be transferred to other agencies as necessary in order to continue weather information flow to Holloman AFB customers.

1.12. Release of Weather Information. Support to non-DoD agencies and the general public will not be provided without the approval of the Wing Public Affairs Office.

Chapter 2

AIRFIELD SERVICES ELEMENT

2.1. Basic Weather Watch (BWW). A BWW will be conducted during periods when the airfield is controlled and during periods when any of the mandatory AMOS augmentation criteria is occurring. Weather personnel will check weather conditions at intervals not to exceed **20 minutes** to determine the need for a special observation.

2.1.1. The FMQ-19 may be augmented when the airfield is controlled and the weather technician feels augmentation is necessary to accurately support safety of flight.

2.1.2. When a reliable source (ATC personnel, pilots) reports weather conditions different from the last report, weather personnel will recheck the weather and, if required, disseminate a new observation and log out the FMQ-19 if necessary.

2.2. Continuous Weather Watch (CWW). The FMQ-19 provides an automatic continuous watch. When augmentation is required and deemed appropriate, weather technicians will monitor weather conditions continuously and perform **no other significant duties**, to determine the need for a SPECI observation and to ensure that the sensor does not need to be augmented.

2.3. Cooperative Weather Watch. The WF will establish a cooperative weather watch with ATC and other appropriate base agencies, as required. Of primary concern is the report of tower visibility different from the prevailing surface visibility, local PIREPs, and any occurrence of previously unreported weather conditions that could affect flight safety or be critical to the safety or efficiency of other local operations and resources. Based on reevaluation of the different weather conditions reported and local policy, the technician will follow the guidance outlined in AFMAN 15-111.

2.4. 'Eyes Forward'. The WF integrates weather radar data, meteorological satellite imagery, lightning detection display, and non-standard weather data systems to create an integrated weather picture for the 25 OWS. 'Eyes forward' yields meaningful meteorological information not contained in coded observations for the 25 OWS and is an integral part of the METWATCH for Holloman AFB. The WF will provide 'eyes forward' to the 25 OWS during WF duty hours by providing significant time-sensitive information to the 25 OWS concerning local area weather patterns and un-forecast changes.

2.5. Terminal Aerodrome Forecast (TAF).

2.5.1. Weather technicians at the 25 OWS will prepare and disseminate a TAF via JET at 0400, 1200, and 2000 Zulu time and cover a 30-hour period. All TAF nomenclature can be found in AFMAN 15-124.

2.5.2. Specification and Amendment Criteria. The TAF Specification and Amendment criteria are outlined in AFMAN 15-129V1 and the Holloman AFB IDP.

2.5.3. Dissemination. The 25 OWS will disseminate the TAF via JET. If JET is inoperative, the TAF will be issued through AFW-WEBS. If AFW-WEBS is inoperative, TAFs will be disseminated verbally to the WF, who will in turn disseminate it to ATC, SOF, and Command Post when the airfield is open.

2.6. Surface Observations.

2.6.1. **Observation Criteria.** All observation nomenclature can be found in AFMAN 15-111.

2.6.1.1. **Special Observation Criteria.** For Special Criteria, please reference AFMAN 15-111 and DoD Flight Information Publications (FLIPS).

2.6.2. **Location.** The official observation for Holloman Air Force Base is taken by the FMQ-19 which is located within the intersection of runways 16 and 22. The discontinuity sensor group at the approach end of runway 34 measures winds, visibility, and ceiling. Winds and ceilings are also measured at the approach ends of runways 25 and the 04/07 intersection. An additional wind sensor takes measurements at the midfield intersection of runways 16/34 and 07/25.

2.6.3. **Shortfalls and Limiting Factors.** There are several limiting factors included in the following list. The weather technician's limited view of the horizon can prevent observation of some weather phenomena to the south and to the northeast. The automated fixed meteorological equipment (FMQ-19) cannot determine a ceiling above 25,000 feet and cannot observe tornados, volcanic ash, snow depth, hail, ice pellets, funnel clouds, or smoke, limiting measurements during automated procedures. In addition some of the reportable visibility values listed in the FLIP may not be supported by the FMQ-19. Finally, the high intensity lights northeast of Building 577 and near the softball fields to the south may restrict the ability to determine sky condition and visibility during hours of darkness when augmentation procedures are being conducted.

2.6.4. **Augmentation.** When augmentation is required (supplementation or backup), the WF technician goes to the manual observation point approximately 30 feet north of the northeast corner of Building 577.

2.6.4.1. Mandatory supplementation criteria are found in AFMAN 15-111 and are implemented when the airfield is open.

2.6.4.2. In addition to the mandatory supplementation criteria, the weather technician will also supplement the observation when there are erroneous or non-reported ceilings below 3000 feet and visibility less than 3 miles, erroneous precipitation readings, when thunder is heard but not in the automated observation, whenever lighting is within 10 NM, and any time the automated observation is in error and could impact flight safety or operations.

2.6.5. **Dissemination of Observations.** The FMQ-19 can automatically send/disseminate weather observations through JET. The weather technician can augment the FMQ-19 observation in JET and then disseminate observations over JET.

2.6.6. **Backup Dissemination.** If JET is inoperative, observations will be disseminated verbally to ATC, RAPCON, SOF, and Airfield Management Operations. The observation will be disseminated long-line through AFW-WEBS, 25 OWS, another WF, or the National Weather Service (NWS).

2.7. Tropical Cyclone Products. The WF will use the Tropical Cyclone Threat Assessment Products produced by the responsible OWS (derived from National Hurricane Center or Joint Typhoon Warning Center) to provide WF customers forecasts of the expected onset, intensity, end times of significant winds, and closest point of approach for the associated tropical cyclone.

No deviation from the official forecast position, track, movement, or intensity category is authorized. The WF may include local effects of vegetation/ground cover, terrain, and position relative to the storm to account for frictional effects on local MEF products.

2.8. Pilot-to-Metro Service (PMSV). During duty hours, the WF will provide full service PMSV on the assigned frequency of 346.55 MHz or through ATC/RAPCON via phone patch. Aircrews are highly encouraged to relay pilot reports during phone patches or through the SOF. When the WF is not on duty no PMSV service will be available. Please see the closest PMSV location referenced in the US IFR Supplement during these times.

2.9. Space Weather Support. Space weather products will be provided, as requested, from the 2nd Weather Squadron via the Space Weather Products section located on AFW-WEBS.

2.10. Toxic Corridors. The WF will provide the 49 CES/CEX with weather information so they can calculate toxic corridors for chemical spills. The WF will not be responsible for producing toxic corridors.

2.11. Chemical Downwind and Effective Downwind Messages. The WF will provide Chemical Downwind and Effective Downwind Messages when requested by the 49 CES Emergency Management office for disaster response, chemical/nuclear attack, and exercise purposes.

2.12. Impacts to Operations. All weather impacts to operations are listed in Attachment 3.

Chapter 3

MISSION WEATHER ELEMENT

3.1. Mission Execution Forecast (MEF).

3.1.1. **Standard Day.** The Holloman MEF will be routinely posted at 0200 local time, and updated at 0600L, 1000L, 1400L, 1800L, and 2200L.

3.1.2. **Non-standard Day.** The Holloman MEF will be posted three hours prior to the earliest takeoff (RPA's are two hours prior to takeoff), unless coordinated the day prior, for each "go". The valid time will be from initial launch until 16 hours after the last MQ-1/9 launch. If there is no RPA flying occurring, the valid time will be 1 hour after the last scheduled land time.

3.1.3. **Amendments.** Anytime significant changes occur the MEF will be amended as soon as possible. The SOF and flying unit POC will be notified when an amendment is made to the MEF.

3.1.4. **Dissemination.** The MEF will be posted to the Base Weather SharePoint site under the tab "Holloman MEF" located at: **https://holloman.eim.acc.hedc.af.mil/Weather/default.aspx**.

3.1.5. **Back Up Dissemination.** Backup method of delivery is via email or fax. Contact information is in Table 3.1.

Table 3.1. Flying Unit Points of Contact.

Unit	Phone Number (DSN)	Fax Number (DSN)	Organizational E-mail
9/29 ATKS	572-5081	572-1216	29ATKSTop3@us.af.mil
311 FS	572-1171	572-2427	311FS_TOP3@us.af.mil
314 FS	572-4476	572-0740	314FS_TOP3@us.af.mil
586 FLTS	572-1222	572-1023	None available
6 ATKS	572-6973	572-0321	6RS/TOP3@us.af.mil
Army Air Division	349-1315	349-1694	usarmy.wsmr.atec.list.army-air-ops@mail.mil
Det 1, 82 ATRS	572-5386	572-7978	None available
GAF FTC	572-2747	572-2763	GAF.FTC.OPSDESK.SOF@us.af.mil
AFLCMC/XZIG		674-8190/ 785-2207	Kirk.Lehneis@us.af.mil

3.1.6. **MEF Product Description**

3.1.6.1. **Step Brief.** This tab will contain the Holloman MEF, Range MEF, Flight Hazards, and other pertinent weather products.

3.1.6.2. **JET.** This tab will display weather sensor information for Holloman AFB, which includes all current WWAs.

3.1.6.3. **KHMN MEF.** This tab contains hour by hour forecast weather data for Holloman AFB.

3.1.6.4. **Range MEF.** This tab contains forecast information for applicable ranges.

3.1.6.5. **Hazards.** This tab contains flying hazards including turbulence, icing, and thunderstorms for the flying ranges and the local flying area.

3.1.6.6. **Flight Level Winds.** This tab contains flight level winds data for all of the flying ranges in 6 hour blocks.

3.1.6.7. **Flight Level Absolute Humidity.** This tab contains absolute humidity data for all of the flying ranges in 6 hour blocks.

3.1.6.8. **D-Values.** This tab contains D-Value information for flight levels 050-200 in 6 hour blocks.

3.1.6.9. **Solar/Lunar/Illum.** This tab contains solar/lunar data as well as illumination data broken into tabs for each month of the year.

3.1.6.10. **Space Weather Impacts.** This tab displays information concerning space weather impacts to Holloman AFB.

3.1.6.11. **Fire Weather Forecast.** This chart shows the fire risk levels for New Mexico. This Fire Danger data is generated by the US Forest Service Wildland Fire Assessment System. USFS-WFAS is responsible for the content of this slide.

3.1.6.12. Additional tabs may be added upon request to support special mission requirements as needed.

3.2. MISSIONWATCH.

3.2.1. The WF will conduct a continuous MISSIONWATCH of all routes and flying areas used by Holloman flying units. The WF will provide the SOF and flying units updates for weather affecting airfield operations and area missions via the MEF and phone notification. MISSIONWATCH criteria will be based off of aircraft sensitivities and mission requirements. If weather conditions change and a MEF amendment is needed (due to changes in cloud heights, hazards, flight winds, forecasts at alternate bases, or any condition that affect aircraft weather thresholds), the WF will amend and reissue the MEF with updated current and forecast conditions.

3.2.2. **Flying Unit Points of Contact.** All flying units can be contacted for any significant changes in the observation or amendments to the forecast as shown in Table 3.1.

3.2.3. **Impacts to Operations.** All weather impacts to operations are listed in Attachment 3.

3.3. Flight Weather Brief. The WF will provide flight weather briefings using DD Form 175-1 or verbal briefings based on the pilot's requirement for all assigned aircraft, transient aircraft (during duty hours if time permits), and aircraft contacted through PMSV. If duty priorities preclude timely completion of the briefing, weather technicians will direct transient aircrews to 25 OWS or their home-station WF.

3.4. Squadron Integration.

3.4.1. **6th Attach Squadron (6 ATKS), 9th Attack Squadron (9 ATKS), and 29th Attack Squadron Support (29 ATKS).** The WF will assign weather technicians to provide weather support to include the production of the Mission Execution Forecast (MEF), weather briefings, and MISSIONWATCH. This technician will be co-located within an operations building when manpower allows.

Chapter 4

STAFF WEATHER ELEMENT

4.1. Wing Staff Meetings. The content of the briefing is flexible but will include a current satellite picture, a 5- day forecast for Holloman AFB, and a stoplight operational impacts slide.

4.2. Installation Command Center/Crisis Action Team. The format of the briefing will be tailored to the scenario driving the meeting. The briefing may include the current weather, 5-day outlook for Holloman AFB, enroute weather and hazards, and forecast destination weather.

4.3. Deployment Concept Briefing. The focus of this briefing will be on departure conditions and deployed area conditions and climatology. As a minimum, the briefing will include forecast conditions at Holloman AFB for departure time, deployed area climatological conditions, and forecast conditions for destination arrival time. Other topics can be briefed upon request.

4.4. Instrument Refresher Course (IRC). A WF representative will provide a local weather effects briefing to all IRC classes for host and tenant units. IRC schedulers will provide the WF with a schedule of upcoming IRCs as early in the process as possible.

4.5. Climatology Support. Climatology data will be available upon request. This includes requests for data for other locations. Requests should be made at least five duty days in advance in order to allow the WF time to research and compile the data.

4.6. Air Traffic Control Training/Orientation. The WF will provide orientation, training, and certification for ATC personnel. Training/certification can be conducted Monday-Friday, between the hours of 0800-1600L. ATC personnel will contact the WF to coordinate a training time.

4.7. Non-Standard Requests. WF personnel will do their best to support any official meteorological request as duty priorities permit. Requests from outside the DoD will be coordinated through Public Affairs.

Chapter 5

WATCHES, WARNINGS, AND ADVISORIES

5.1. General.

5.1.1. The 25 OWS and the WF will jointly monitor observed and forecast weather conditions to notify selected agencies when pre-established weather condition criteria occur or are expected to occur.

5.1.2. Desired Lead Time (DLT). Advanced warning of threatening weather conditions allows local agencies to take specific actions prior to occurrence. The desired lead-time is the minimum amount of advanced notice an agency requires prior to the onset of a particular weather phenomenon.

5.1.3. All WWAs are issued IAW AFMAN 15-129 V1 & V2. Warnings and advisories may be issued as forecasted or observed.

5.1.4. The WF may issue or supersede a 25 OWS-issued weather warning only when imminent weather conditions pose a hazard to life or property and prior coordination with 25 OWS is not practical and/or communications do not allow. The WF will be responsible for local dissemination and contact the 25 OWS as soon as possible afterward so the 25 OWS can assume responsibility/accountability.

5.2. Agency Responsibilities.

5.2.1. The 25 OWS will:

5.2.1.1. Produce, disseminate, and maintain all forecast weather watches, weather warnings, and weather advisories. The 25 OWS will also be responsible for observed criteria when the WF is closed.

5.2.1.2. Notify stand-by WF personnel when severe weather is observed or forecast to affect Holloman AFB.

5.2.2. The WF will:

5.2.2.1. Issue observed weather warnings and advisories when the airfield is open.

5.2.2.2. When a weather technician is on duty, the WF will notify the 25 OWS when local MISSIONWATCH indicates a 25 OWS-issued watch, warning, or advisory is, or may become, unrepresentative of current or expected weather conditions.

5.2.2.3. Disseminate weather WWAs via JET.

5.2.2.4. Maintain a full WWA dissemination listing in accordance with AFMAN 15-129 V2. This document will be maintained separately from this instruction for ease of use and update.

5.2.3. The 49 WG Command Post will:

5.2.3.1. Monitor weather information disseminated through JET. Acknowledge receipt of automated JET WWA notifications.

5.2.3.2. Disseminate weather WWAs to required agencies in accordance with locally maintained checklists.

5.3. Weather Watches. 25 OWS will issue a forecast weather watch for within 5 NM of the center of the Holloman AFB runway complex when the potential exists for the criteria defined in Table 5.1.

Table 5.1. Forecast Weather Watch Criteria and Desired Lead Times.

#	Criteria	Desired Lead Time
1#	Tornado	As potential warrants
2#	Damaging Winds ≥ 50 kts	As potential warrants
3#	Freezing Precipitation	As potential warrants
4	Blizzard Conditions (Winds ≥ 30kts and Visibility ≤ 1/4SM in Snow/Blowing Snow)	As potential warrants
5*	Heavy Rain (≥ 2 inches in 12 hrs)	As potential warrants
6	Heavy Snow (≥ 2 inches in 12 hrs)	As potential warrants
7	Moderate Thunderstorms (Large hail ≥ 1/4 inch but < 3/4 inch and/or strong winds 35-49 kts)	As potential warrants
8#	Severe Thunderstorms (Damaging hail ≥ 3/4 inch and/or damaging winds ≥ 50 kts)	As potential warrants
9	Lightning within 5 NM	30 minutes
Asterisked items (*) indicate variation from AFMAN 15-129V1 & V2.		
Identified items (#) indicate Severe Weather Action Procedure Criteria (Section 5.8).		

5.4. Weather Warnings.

5.4.1. **Forecast Weather Warnings**. 25 OWS will issue a forecast weather warning for within 5 NM of the center of the Holloman AFB runway complex when the criteria defined in Table 5.2. is occurring or is expected to occur.

Table 5.2. Forecast Weather Warning Criteria and Desired Lead Times.

#	Criteria	Desired Lead Time
1#	Tornado	15 minutes
2#	Damaging Winds ≥ 50 kts	60 minutes
3	Moderate Thunderstorms (Large hail ≥ 1/4 inch but < 3/4 inch and/or strong winds 35-49 kts)	60 minutes
4#	Severe Thunderstorms (Damaging hail ≥ 3/4 inch and/or damaging winds ≥ 50 kts)	60 minutes

5#	Freezing Precipitation	60 minutes
6	Blizzard Conditions (Winds ≥ 30kts and Visibility ≤ 1/4SM in Snow/Blowing Snow)	60 minutes
7	Heavy Snow (≥ 2 inches in 12 hrs)	60 minutes
8*	Heavy Rain (≥ 2 inches in 12 hrs)	60 minutes
9	Strong Winds ≥ 35 but < 50 kts	60 minutes
Asterisked items (*) indicate variation from AFMAN 15-129V1 & V2.		
Identified items (#) indicate Severe Weather Action Procedure Criteria (Section 5.8).		

5.4.2. **Observed Weather Warnings**. The WF will issue an observed weather warning for events within 5 NM of Holloman AFB runway complex or within 10 NM of either the north or south end of the High Speed Test Track (HSTT) when the criteria defined in Table 5.3. occurs. The 25 OWS will issue observed lightning warnings during WF non-duty hours; however, since the 25 OWS is limited to cloud-to-ground strike data from the National Lightning Detection Network, it does not have the capability to detect or observe other lightning strike occurrences (e.g., cloud-to-cloud lightning).

Table 5.3. Observed Weather Warning Criteria and Desired Lead Times.

#	Criteria	Desired Lead Time
1	Lightning (Within 10 NM of the Test Track)	Observed
2	Lightning (Within 5 NM)	Observed

5.5. Weather Advisories.

5.5.1. **Forecast Weather Advisories.** The 25 OWS will issue a forecast weather advisory for within 5 NM of the center of the Holloman AFB runway complex when the criteria defined in Table 5.4. is occurring or is expected to occur.

Table 5.4. Forecasted Weather Advisory Criteria and Desired Lead Times.

#	Criteria	Desired Lead Time
1	Surface winds ≥ 25 but < 34 kts	30 minutes

5.5.2. **Observed Weather Advisories.** The WF will issue an observed weather advisory when the airfield is open when the criteria defined in Table 5.5. occurs. Advisories #6 through #14 in Table 5.5. are only issued when the airfield is open.

Table 5.5. Observed Weather Advisory Criteria and Desired Lead Times.

#	Criteria	Desired Lead Time
1	Surface temperature > 32ºF but ≤ 40ºF	Observed
2	Surface temperature ≤ 32ºF	Observed
3	Thunderstorms within 25 miles of Holloman AFB	Observed
4	Thunderstorms within 10 miles of Holloman AFB	Observed
5	Ice FOD (temp ≥ -4ºF and < 50ºF and dew point within 5ºF of the temp)	Observed

6	Surface winds sustained ≥ 35 kts occurring in the LFA	Observed
7	Light or greater icing in the LFA	Observed
8	Moderate or greater turbulence in the LFA	Observed
9	LLWS on station	Observed
10	Observed Crosswinds 15-19 kts	Observed
11	Observed Crosswinds 20-24 kts	Observed
12	Observed Crosswinds ≥ 25 kts	Observed
13	Observed Surface Winds ≥ 31 kts	Observed

5.6. Dissemination of Watches/Warnings/Advisories. All WWAs will be disseminated using JET.

5.6.1. If JET is inoperative:

5.6.1.1. During WF duty hours, the WF will contact Command Post, SOF, and Airfield Management to disseminate WWAs verbally.

5.6.1.2. During non-WF hours the 25 OWS will be responsible for disseminating the WWAs to Holloman AFB via back-up methods.

5.7. WWA Text Format. The text of WWAs will contain the corresponding number, the specific valid time period (or "until further notice" for observed criteria), and specific conditions expected. They will be numbered consecutively with the # of the month, and the # of the WWA. For example, the first warning issued in March will be #03-001; the next is #03-002, etc.

Chapter 6

SEVERE WEATHER ACTION PROCEDURES (SWAP)

6.1. General. These procedures are in place to ensure sufficient personnel are available during potential/actual severe weather events. For the purposes of these procedures severe weather is defined as any weather phenomenon considered critical enough by Holloman AFB to require advance/special notice and subsequent actions to prevent serious injury or damage to personnel, property, or resources.

6.2. Responsibilities. The WF will perform the SWAP as defined in AFMAN 15-129 V2, AFI 10-206, Operational Reporting, and this document. More specifically, the WF will accomplish the following procedures:

6.2.1. **Notification.** The on WF duty weather technician or the Command Post Controller will notify the Severe Weather Management Team (SWMT) standby member(s) according to the following guidance:

6.2.1.1. During WF duty hours the weather technician will implement SWAP by notifying the SWMT whenever one or more WWAs in Table 6.1. are issued.

6.2.1.2. During WF non-duty hours the 25 OWS will notify the standby weather forecaster of issued WWA in Table 6.1. In the event the standby technician cannot be contacted the 25 OWS will contact the Command Post, who will then attempt to make contact with the WF standby technician and Flight Leadership.

Table 6.1. Weather Watches and Warnings Requiring SWMT Leader Notification.

#	Criteria
1	Tornado
2	Surface winds $\geq$ 50 kts
3	Severe Thunderstorms
4	Freezing Precipitation

6.2.2. **Activation.** The WF will be on duty in the weather station when a weather watch or warning from Table 6.1. is issued. During WF non-duty hours, this will require the standby weather technician to report to duty after they have notified the SWMT leader. The SWMT leader will brief the weather situation, via phone patch through the Command Post, to the 49 WG Responsible Officer (RO) along with the 49 OG/CC, 49 OSS/CC, 49 MXG/CC. Updates will be provided to these same personnel as requested or warranted. The SWMT leader will recall additional weather technicians (or place on standby) and execute SWAP duties/responsibilities as the situation warrants.

6.2.3. **OPREP-3 Procedures.** When severe weather causes damage or injury at Holloman AFB, the WF or 25 OWS, may be asked to provide information to the Command Post in accordance with AFI 10-206. This information will be provided in a time-sensitive manner.

Chapter 7

MISSION AND REQUIREMENTS OF SUPPORTED AGENCIES

7.1. General. The WF supports numerous units with diversified missions assigned to Holloman AFB, as well as resource protection and information service to the entire base population. Each unit has unique weather requirements to accomplish their mission.

7.2. 49th Operations Group (6 ATKS, 9 ATKS and 29 ATKS).

7.2.1. **Aircraft/Mission.** MQ-1/MQ-9: Pilot and Sensor Operator training.

7.2.2. **Weapons Systems.** The MQ-1/MQ-9 utilizes a Multi-Spectral Targeting System (MTS) and may be armed with AGM-114 Hellfire II Missiles. The MQ-9 may also be armed with GBU-12 Laser Guided Bombs. As an evolving platform, the list may fluctuate.

7.2.3. **Weather Support Requirements.** The WF will provide MEFs and MISSIONWATCH for local flying operations and missions in scheduled Flying Areas.

7.3. 54th Fighter Group (311 FS and 314 FS)

7.3.1. **Aircraft/Mission.** Basic Course F-16 pilot training.

7.3.2. **Weapons Systems.** AIM-120C, AIM-9M, AIM-9X, 500 lb. GBU-12, 500 lb. MK-82, 2000 lb. MK-84, and M61A2 20MM. F-16's may also be armed with munitions that support training objectives.

7.3.3. **Weather Support Requirements.** The WF will provide MEFs and MISSIONWATCH for local flying operations and missions in scheduled Flying Areas.

7.4. 586th Flight Test Squadron (586 FLTS).

7.4.1. **Aircraft/Mission.** T-38B, C-12, and other assigned aircraft tasked to support their mission depending on specific test requirements: Evaluates systems and subsystems for aircraft, missiles, and space vehicles.

7.4.2. **Weather Support Requirements.** The WF will provide MEFs and MISSIONWATCH for local flying operations and missions in scheduled Flying Areas.

7.5. 82nd Aerial Targets Squadron.

7.5.1. **Aircraft/Mission.** QF-4E and QF-16: DoD research, development, and test projects. Supervises and monitors the operations and maintenance of QF-4 and QF-16 drones.

7.5.2. **Weather Support Requirements.** The WF will provide MEFs and MISSIONWATCH for local flying operations and missions in scheduled Flying Areas.

7.6. Aero Club.

7.6.1. **Aircraft/Mission.** Diamond Aircraft DA-40, T-41, and Cessna 210: Provides Federal Aviation Administration certified part 141 flying courses for aircraft type rating and Private Pilot Instrument, Commercial and Airline Transport Pilot certification.

7.6.2. **Weather Support Requirements.** The WF provides planning weather on the webpage, as well as resource protection WWAs. The WF can only provide flight weather briefings to Aero Club members performing official Air Force operational duties.

7.7. Acoustic Research Complex (ARC).

7.7.1. **Aircraft/Mission**. Air Force Research Laboratory (AFRL) personnel measure acoustic signatures of aircraft flown through the complex at various engine/power settings and configurations.

7.7.2. **Weather Support Requirements**. The WF will provide general planning weather, MEFs and MISSIONWATCH for local flying operations and execution forecasts when AFLCMC/XZIG is not available.

7.8. Army Air.

7.8.1. **Aircraft/Mission.** C-12, UH-1, UH-60: Provide support to the White Sands Missile Range through activities including aerial photography, missile recovery, cargo and personnel transportation, and experimental missions.

7.8.2. **Weather Support Requirements.** The WF will provide verbal weather briefings or MEFs and MISSIONWATCH for local flying operations and missions in scheduled Flying Areas.

7.9. German Air Force Flying Training Center (GAF FTC).

7.9.1. **Aircraft/Mission.** GR-1: Provide the German Air Force with pilots trained in the Tornado.

7.9.2. **Weather Support Requirements.** The WF will provide MEFs and MISSIONWATCH for local flying operations and missions in scheduled Flying Areas.

Chapter 8

RECIPROCAL SUPPORT

8.1. General. This chapter outlines WF and individual unit responsibilities.

8.2. 49th Wing.

8.2.1. 49th Wing personnel will:

8.2.1.1. Coordinate and schedule with the WF all upcoming exercise support.

8.2.1.2. Advise the WF of any changes/updates to all base Host/Tenant Unit Agreements.

8.2.2. The WF will:

8.2.2.1. Manage WF personnel and resources to support base operations/exercises.

8.2.2.2. Provide staff weather support for routine briefings and inclement weather notifications.

8.3. Manned Flying Units.

8.3.1. Flying unit personnel will:

8.3.1.1. Notify weather personnel of flight scheduling changes no later than 12 hours in advance or as soon as possible to ensure forecaster personnel are available and scheduled to support as required (i.e., brief and take off times, route, range, or flight cancellations).

8.3.1.2. Ensure the weather technician receives information required to produce Target Acquisition Weather Software (TAWS) products.

8.3.1.3. Fill out electro-optical feedback worksheets for all missions for which they need to receive TAWS.

8.3.1.4. Pass all significant PIREPs to the WF through PMSV or phone patch through RAPCON, or ATC Tower.

8.3.1.5. Inform the WF of weather communications equipment outages when necessary by calling the WF. Coordinate alternative method of dissemination of weather information.

8.3.1.6. Provide feedback on MEF products to allow for verification and improve product performance.

8.3.2. The WF will:

8.3.2.1. Ensure MEF products are disseminated properly, and troubleshoot if not disseminated correctly.

8.3.2.2. Debrief pilots upon termination of flight, for any differences between actual and briefed weather.

8.3.2.3. Assist mission planners on a routine basis.

8.3.2.4. When notified by the flying unit of problems with JET, assist in troubleshooting the problem, and provide an alternate means of disseminating weather information.

8.4. RPA Units.

8.4.1. Flying unit personnel will:

8.4.1.1. Accomplish all tasks listed in Section 8.3.1.

8.4.1.2. Provide orientation and indoctrination training to new weather personnel by appointment.

8.4.1.3. Provide a workspace and equipment for the integrated weather forecaster.

8.4.1.4. Provide a workspace and equipment for the AOL.

8.4.2. The WF will:

8.4.2.1. Accomplish all tasks listed in Section 8.3.2.

8.4.2.2. When integrated, provide in-person weather support to the Top-3/Operations Desk throughout the flying day.

8.5. 49th Wing Command Post (49 WG/CP).

8.5.1. 49 WG/CP will:

8.5.1.1. Disseminate WWAs.

8.5.1.2. Notify the WF of weather communications equipment outages.

8.5.1.3. During WF non-duty hours, notify standby weather forecaster or flight leadership as requested by the 25 OWS.

8.5.1.4. Up channel to higher command, via Operational Reporting, actual occurrences of severe weather as required. 49 WG/CP will coordinate draft report with the WF or 25 OWS prior to posting the report.

8.5.1.5. Provide orientation and indoctrination training to new weather personnel by appointment.

8.5.2. The WF or 25 OWS will:

8.5.2.1. Ensure all WWA notifications take place via JET or backup method.

8.5.2.2. When notified by 49 WG/CP of problems with JET, assist in troubleshooting the problem and provide an alternate means of disseminating weather information if the equipment must be logged out.

8.5.2.3. Provide immediate notification of actual occurrences of severe weather as defined in Table 6.1.

8.5.2.4. Provide the Command Post with an updated memorandum with the standby weather phone contact information as well as current contact information for Flight Leadership. WF Updates to this memorandum will be provided as required.

8.6. 49th Wing Safety (49 WG/SE).

8.6.1. 49 WG/SE will notify the WF as soon as possible of all known aircraft mishaps or incidents requiring weather information.

8.6.2. The WF or OWS will:

8.6.2.1. Provide all available weather information related to aircraft accident or mishap investigations.

8.6.2.2. Provide a qualified weather officer for safety investigation boards.

8.6.2.3. Provide seasonal briefings on weather-related aviation hazards at aircrew Flight Safety Meetings upon request.

8.7. 49th Wing Public Affairs (49 WG/PA).

8.7.1. 49 WG/PA will:

8.7.1.1. Notify base population via marquee of severe weather information when deemed necessary by the wing commander.

8.7.1.2. Approve release of weather information to non-DoD agencies and the public based on public release regulations and consultation on legality of providing the requested data.

8.8. 49th Civil Engineering Squadron Operations, Environmental and Programs Flights (49 CES/CEO, 49 CES/CEA, and 49 CES/CEP).

8.8.1. 49 CES/CEO will:

8.8.1.1. Provide emergency backup power for WF operations.

8.8.1.2. Notify the WF 15 minutes prior to any work on Building 577's power supply and/or generators. The WF reserves the right to delay maintenance, testing, or modification to Building 577's power supply, commercial or generator, during operating hours when such maintenance could degrade MISSIONWATCH support to local flying or METWATCH support when base resource protection is an issue.

8.8.2. The WF will:

8.8.2.1. Provide a monthly local climatology summary to 49 CES/CEO, 49 CES/CEA and 49 CES/CEP by the fifth working day of each month.

8.9. 49th Civil Engineering Squadron Readiness Flight (49 CES/CEX).

8.9.1. 49 CES/CEX will:

8.9.1.1. Calculate toxic hazard corridors for chemical spills. CEX will use onsite weather data in conjunction with indigenous weather information provided by the WF.

8.9.2. The WF will:

8.9.2.1. Provide Chemical Downwind Messages and Effective Downwind Messages to the Nuclear, Biological, and Chemical Cell upon request.

8.9.2.2. Provide weather data required for chemical spills, emergencies, or disasters.

8.10. 49th Communications Squadron (49 CS).

8.10.1. 49 CS will:

8.10.1.1. Provide routine and emergency maintenance for communications and computer equipment located on HAFB not covered by Contractor Logistics. This includes standard maintenance to the JET server located in Building 325.

8.10.2. The WF will:

8.10.2.1. Notify the 49th CS of network or system outages.

8.11. 49th Operations Support Squadron Air Traffic Control And Landing System (ATCALS) Flight (49 OSS/OSAM).

8.11.1. ATCALS will:

8.11.1.1. Provide routine and emergency maintenance for weather observing and weather related communications equipment located at or near Holloman AFB not covered by Contractor Logistics. Reference TO 31M1-2FMQ19-1 and AFMAN 15-111 (TMQ-53) for frequency and procedures for conducting maintenance.

8.11.1.2. Follow the priorities established IAW 49th Operations Group, 49th Mission Support Group, and White Sands Missile Range Letter of Agreement guidance for restoring inoperative weather sensing and communication equipment. Maintenance personnel will receive permission from the WF before taking equipment down for maintenance. ATCALS will also coordinate preventive maintenance downtimes with the WF.

8.12. 49th Operations Support Squadron Airfield Operations Section (49 OSS/OSAA).

8.12.1. 49 OSS/OSA will:

8.12.1.1. Disseminate weather advisories and warnings in accordance with local procedures.

8.12.1.2. Notify the WF of weather communications equipment outages.

8.12.1.3. Airfield Management will provide the WF with changes in the runway condition.

8.12.1.4. Provide airfield orientation to new weather personnel by appointment.

8.12.1.5. When requested by the WF, Airfield Management will submit weather information changes to FLIPS to the Air Force Flight Standards Agency.

8.12.1.6. When requested by the WF, Airfield Management will issue Notices to Airmen (NOTAMS) of weather equipment outages and limitations.

8.12.2. The WF will:

8.12.2.1. Ensure all WWA notifications via JET or backup methods as outlined in this instruction.

8.12.2.2. Notify Airfield Management of all PMSV radio outages and restorations to service.

8.12.2.3. Notify Airfield Management when evacuating the WF facility.

8.12.2.4. When notified by 49 OSS/OSAA of problems with JET, assist in troubleshooting the problem and provide an alternate means of disseminating weather information, if the equipment must be logged out.

8.13. 49th Operations Support Squadron Tower Section (49 OSS/OSAT).

8.13.1. 49 OSS/OSAT will:

8.13.1.1. Participate in the CWW IAW AFMAN 15-111.

8.13.1.2. Notify the WF of weather communications equipment outages.

8.13.1.3. ATC Tower personnel will notify the WF of changes in the active runway.

8.13.1.4. Relay all PIREPs to the WF within 10 minutes of receipt.

8.13.1.5. Provide tower orientation to new weather personnel by appointment.

8.13.2. The WF will:

8.13.2.1. Ensure all WWA notifications via JET or backup methods as outlined in this instruction.

8.13.2.2. Incorporate ATC Tower reported weather observations provided under the CWW concept into weather observations based on the discretion of the weather technician.

8.13.2.3. Notify ATC Tower of all PMSV radio outages and restorations to service.

8.13.2.4. Notify ATC Tower when evacuating the WF facility.

8.13.2.5. Provide weather orientation, training, and certification briefings for ATC Tower controllers by appointment.

8.13.2.6. When notified by 49 OSS/OSAT of problems with JET, assist in troubleshooting the problem and provide an alternate means of disseminating weather information, if the equipment must be logged out.

8.14. 49th Operations Support Squadron Radar Approach Control Section (49 OSS/OSAR).

8.14.1. 49 OSS/OSAR will:

8.14.1.1. Relay all weather-related PIREPs to the WF.

8.14.1.2. Notify the WF of weather communications equipment outages.

8.14.1.3. Provide orientation to new weather personnel by appointment when requested.

8.14.2. The WF will:

8.14.2.1. Ensure all WWA notifications via JET or backup method.

8.14.2.2. Notify RAPCON of all PMSV radio outages and restorations to service.

8.14.2.3. Notify RAPCON when evacuating the WF facility.

8.14.2.4. Provide weather orientation briefings for RAPCON controllers by appointment.

8.14.2.5. When notified by 49 OSS/OSAR of problems with JET, assist in troubleshooting the problem and provide an alternate means of disseminating weather information, if the equipment must be logged out.

8.15. 49th Operations Support Squadron Weapons and Tactics Flight (49 OSS/OSK).

8.15.1. 49 OSS/OSK will:

8.15.1.1. Notify the WF of the date, time, mission commander, and other pertinent information for verification planning meetings.

8.15.1.2. Assist the WF by providing training to WF members covering weather related impacts to weapons and tactics.

8.15.2. The WF will:

8.15.2.1. Provide briefings on WF services, flight weather hazards, and weather codes and charts at requested briefings.

8.16. 49th Operations Support Squadron Operations Flight (49 OSS/OSO).

8.16.1. 49 OSS/OSO will:

8.16.1.1. Provide information relating to the planned missions of 49 WG and tenant unit missions that utilize 49 WG airspace.

8.16.1.2. Provide information related to Air Refueling tracks utilized by aircraft assigned to or performing temporary operations from Holloman AFB.

8.16.1.3. Provide monthly metrics pertaining to sorties generated by 49 WG aircraft.

8.16.2. The WF will:

8.16.2.1. Provide weather data and planning information as requested.

8.17. 846th Test Squadron (846 TS).

8.17.1. 846 TS will:

8.17.1.1. Request support for test track missions during 846th TS Staff Meteorologist's TDY/leave no less than one month in advance.

8.17.1.2. Provide the WF with a copy of the test track schedule.

8.17.1.3. Provide the WF with format and specific instructions for mission support and reports.

8.17.1.4. Provide test date, times, and specific requirements for each mission.

8.17.1.5. Provide copies of Operations Plans, weather annexes, and other information to the WF.

8.17.1.6. Provide orientation and indoctrination training to new weather personnel by appointment.

8.17.2. The WF will:

8.17.2.1. Provide backup support for 846 TS test track missions when the Staff Meteorologist is on leave, when personnel are available. If necessary, obtain training from the Staff Meteorologist.

8.17.2.2. Request mission weather go/no go criteria from the Staff Meteorologist prior to Test Readiness Review. If required, the weather technician will advise test manager on weather go/no go criteria.

8.17.2.3. If operational requirements permit, provide one weather technician for the operational test phase and L-1 day Test Readiness Review meeting.

8.17.2.4. Prepare 24-hour weather report after the mission.

8.18. Acoustic Research Complex (ARC) Program/ AFLCMC/XZIG.

8.18.1. AFRL ARC Program will:

8.18.1.1. Provide a schedule of test days and back-up test days, times of testing, and expected set-up/tear down schedule at least 2-weeks prior (provide more notice if possible).

8.18.1.2. Provide aircraft type and owning organization (with POCs), if possible.

8.18.2. AFLCMC/XZIG will:

8.18.2.1. Provide staff meteorological support to the Program Test Director (PTD) for ARC tests.

8.18.2.2. Provide the consensus, official weather forecast for tests and set-up/tear down for tests for the ARC to the PTD.

8.18.2.3. Arrange for alternate weather support when WF or AFLCMC/XZIG are not able to provide support.

8.18.2.4. Coordinate with 557th Weather Wing and other government weather organizations.

8.19. Weather Flight (WF).

8.19.1. The WF will:

8.19.1.1. Provide general planning weather, MEFs and MISSIONWATCH for local flying operations area, briefings, and execution forecasts when AFLCMC/XZIG is not available.

8.19.1.2. Provide METWATCH of ARC site during test times and during set-up/tear down times through AFLCMC/XZIG or as directed by the PTD for the ARC, (as resources and schedule permit).

8.20. 49th Security Forces Squadron (49 SFS).

8.20.1. 49 SFS will:

8.20.1.1. Security Forces will notify the WF of observed hail, tornados, freezing precipitation, or other significant weather encountered during routine patrols during WF duty hours.

8.20.2. The WF will:

8.20.2.1. Provide requested weather information for Security Forces operations.

8.20.2.2. Provide weather observer training, as required.

8.21. 49th Bioenvironmental Engineering Element (49 AMDS/SGPB).

8.21.1. 49 AMDS/SGPB will:

8.21.1.1. IAW AFI 48-151, issue and disseminate installation heat stress flag conditions and Fighter Index of Thermal Stress (FITS) conditions.

8.21.2. The WF will:

8.21.2.1. Provide atmospheric temperature information through JET to calculate FITS condition.

HOUSTON R. CANTWELL
Colonel, USAF
Commander, 49th Wing

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFI 10-206 ACCSUP, *Operational Reporting*, 13 April 2015

AFI 10-2501, *Air Force Emergency Management (EM) Program Planning and Operations*, 19 April 2016

AFI 11-202v3, *General Flight Rules*, 07 November 2014

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AFMAN 15-111, *Surface Weather Observations*, 27 February 2013

AFMAN 15-124, *Meteorological Codes*, 28 February 2013

AFMAN 15-129 Volume 1, *Air and Space Weather Operations - Characterization*, 6 December 2011

AFMAN 15-129 Volume 2 ACCSUP, *Air and Space Weather Operations – Exploitation*, 15 February 2015

AFMAN 33-363, *Management of Records*, 01 March 2008

AFMAN 91-201, *Explosives Safety Standards*, 12 January 2011

AFPD 15-1, *Air Force Weather Operations*, 12 November 2015

Prescribed Forms

None

Adopted Forms

AF Form 847, *Recommendation for Change of Publication*

DD Form 175-1, *Flight Weather Briefing*

Abbreviations and Acronyms

6 ATKS—6th Attack Squadron

9 ATKS—9th Attack Squadron

25 OWS—25th Operational Weather Squadron

29 ATKS—29th Attack Squadron

49 AMDS/SGPB—49th Aeromedical Squadron Bioenvironmental Flight

49 CES—49th Civil Engineer Squadron

49 CES/CEA—49th Civil Engineer Squadron Environmental Flight

49 CES/CEF—49th Civil Engineer Squadron Fire Department

49 CES/CEO—49th Civil Engineer Squadron Operations Flight

49 CES/CEP—49th Civil Engineer Squadron Programs Flight

49 CES/CEX—49th Civil Engineer Squadron Readiness Flight

49 CS—49th Communication Squadron

49 MDG—49th Medical Group

49 MXG/CC—49th Maintenance Group Commander

49 MXS/MXM—49th Maintenance Squadron Production Section

49 MXS/MXMW—49th Maintenance Squadron Munitions Flight

49 OG—49th Operations Group

49 OG/CC—49th OG Commander

49 OSS/CC—49th Operations Support Squadron Commander

49 OSS/OSAA—49th Operations Support Squadron Airfield Management Flight

49 OSS/OSAM—49th Operations Support Squadron METNAV Flight

49 OSS/OSAR—49th Operations Support Squadron RAPCON Flight

49 OSS/OSAT—49th Operations Support Squadron Air Traffic Control Flight

49 OSS/OSK—49th Operations Support Squadron Weapons and Tactics Flight

49 OSS/OSO—49th Operations Support Squadron Operations Flight

49 OSS/OSW—49th Operations Support Squadron Weather Flight

49 SFS—49th Security Forces Squadron

49 WG—49th Wing

49 WG/PA—49th Wing Public Affairs

49 WG/SE—49th Wing Safety

82 ATRS—82nd Aerial Targets Squadron

311 FS—311th Fighter Squadron

314 FS—314th Fighter Squadron

54 OG/CC—54th Operations Group Commander

586 FLTS—586th Flight Test Squadron

704 TG/CC—704th Test Group Commander

846 TS—846th Test Squadron

ACCSUP—Air Combat Command Supplement

AFB—Air Force Base

AFI—Air Force Instruction

AFLCMC/XZIG—Air Force Research Laboratory Acoustic Research Complex Program

AFMAN—Air Force Manual

AFPD—Air Force Policy Directive

AFRL—Air Force Research Laboratory

AFRIMS—Air Force Records Information Management System

AFW-WEBS—Air Force Weather Web

AGE—Aircrew Ground Equipment

AIREP—Special Air Report

AMD—Amendment

AOL—Alternate Operating Location

ARC—Acoustic Research Complex

ATC—Air Traffic Control

A/R—Air Refueling

BWW—Basic Weather Watch

C—Celsius

CIG—Ceiling

CWW—Cooperative Weather Watch

DA—Density Altitude

DET—Detachment

DLT—Desired Lead Time

DOD—Department of Defense

ECC—Emergency Control Center

EM—Emergency Management

FITS—Fighter Index of Thermal Stress

FLIPS—Flight Information Publications

FT—Feet

GAF—German Air Force

GAF FTC—German Air Force Flight Training Center

HAFB—Holloman Air Force Base

HAFBI—Holloman Air Force Base Instruction

HRS—Hours

HSTT—High Speed Test Track

IAW—In accordance with

IDP—Installation Data Page

IFR—Instrument Flight Rules

IRC—Instrument Refresher Course

JET—Joint Environmental Toolkit

KHMN—Holloman Air Force Base

KTS—Knots

LFA—Local Flying Area

LGT—Light

LLWS—Low Level Wind Shear

LOX—Liquid Oxygen

MCC—Maintenance Control Center

MDG—Medical Group

MDT—Moderate

MEF—Mission Execution Forecast

METWATCH—Meteorological Watch

MGMT—Management

MISSIONWATCH—Mission Weather Watch

MSA—Munitions Storage Area

MTS—Multi-Spectral Targeting System

MX—Maintenance

MXS—Maintenance Supervisor

NDI—Non-Destructive Inspection

NM—Nautical Miles

NWS—National Weather Service

OPR—Office of Primary Responsibility

PAR—Post-Attack Reconnaissance

PIREP—Pilot Report

PMSV—Pilot-to-Metro Service

POL—Petroleum, Oil, and Lubricants

RAPCON—Radar Approach Control

RCR—Runway Condition Report

RDS—Records Disposition Schedule

RVR—Runway Visual Range

SFO—Senior Fire Officer

SOF—Supervisor of Flying

SVR—Severe

SWAP—Severe Weather Action Procedures

SWMT—Severe Weather Management Team

TACAN—Tactical Air Navigation

TAF—Terminal Aerodrome Forecast

TAWS—Target Acquisition Weather Software

USAF—United States Air Force

VFR—Visual Flight Rules

VIS—Visibility

WF—Weather Flight

WMO—World Meteorological Organization

WWA—Watches, Warnings, and Advisories

Terms

Aircraft Mishap—Term used to denote any event resulting in damage to, or destruction of, any aircraft, to include lightning strikes, inadvertent departure from the paved runway or taxiway surface, aircraft or Aerospace Ground Equipment (AGE) fires, and forced landings due to in-flight emergencies.

Amendment ()—Used as a message modifier when transmitting an aerodrome forecast amendment.

Climatology—The historical records of weather conditions measured or observed at a specific location is known as climatology. Some data goes back over 100 years, but generally, a 10 to 25 year history is more common. Climatology is useful in planning operations beyond 5 to 7 days. It usually describes the average (or mean) conditions such as high and low temperatures and extremes.

METWATCH—A deliberate process for monitoring the terrestrial weather or space environment in an area or region. The purpose of a METWATCH is to identify when and where observed conditions significantly diverge from forecast conditions and determine courses of action to update or amend a forecast product or group of products and notify designated agencies.

Mission Execution Forecast (MEF)—Mission-tailored environmental information used in the execution of a mission. MEFs describe the meteorological mission environment and concentrate

on environmental threats given specific operating thresholds. Where possible, courses of action to mitigate these threats are offered. WFs and WSTs conduct deliberate forecast processes to develop, deliver, monitor, and amend mission execution forecasts by fusing perishable data with operational and strategic level weather forecast products.

MISSIONWATCH—A deliberate process of monitoring terrestrial weather or the space environment for specific mission-limiting environmental factors that may adversely impact missions in execution. The MISSIONWATCH process is performed by WFs and WSTs and is intended to identify previously unidentified environmental threats and alert decision-makers at the operational unit and/or airborne mission commanders, enabling dynamic changes to mission profiles that may mitigate the environmental threat and optimize the chance of mission success Severe Weather— Any weather condition that poses a hazard to property or life.

Attachment 2

FORMAT FOR WEATHER WATCHES, WARNINGS, AND ADVISORIES

Table A2.1. Forecast Weather Watch Criteria.

#	Criteria	Text
1#	Tornado	Potential for Tornado within 5 NM. A warning will be issued later if required.
2#*	Damaging Winds ≥ 50 kts	Potential for Damaging Winds greater than or equal to 50 kts. A warning will be issued later if required
3#	Freezing Precipitation	Potential for Freezing Precipitation (Any Intensity). A warning will be issued later if required.
4	Blizzard Conditions	Potential for Blizzard lasting greater than or equal to 3 hours. Visibility less than or equal to 1/4 SM and Winds greater than or equal to 30 kts.
5*	Heavy Rain	Potential for Heavy Rain Accumulation greater than or equal to 2 inches within 12 hrs. A warning will be issued later if required.
6	Heavy Snow	Potential for Heavy Snow Accumulation greater than or equal to 2 inches within 12 hrs. A warning will be issued later if required.
7*	Moderate Thunderstorms	Potential for Moderate Thunderstorms. Large Hail greater than or equal to 1/4 but less than 3/4 inches and/or Strong Winds greater than or equal to 35 kts but less than 50 kts. A warning will be issued later if required.
8#*	Severe Thunderstorms	Potential for Severe Thunderstorms. Damaging Hail greater than or equal to 3/4 inches and/or Damaging Winds greater than or equal to 50 kts. A warning will be issued later if required.
9	Lightning within 5 NM	Potential for Lightning within 5 NM. A warning will be issued later if required.
Asterisked items (*) indicate variation from AFMAN 15-129V1 & V2.		
Identified items (#) indicate Severe Weather Action Procedure Criteria (Section 5.8).		

Table A2.2. Forecast Weather Warning Criteria.

#	Criteria	Text
1#	Tornado	Tornado within 5 NM. Take shelter

		immediately.
2#*	Damaging Winds ≥ 50 kts	Damaging Winds greater than or equal to 50 kts. Not associated with thunderstorms forecast value XX kts.
3*	Moderate Thunderstorms	Moderate Thunderstorms. Large Hail greater than or equal to 1/4 but less than 3/4 inches forecast value XX inches and/or Strong Winds greater than or equal to 35 but less than 50 kts forecast value XX kts.
4#*	Severe Thunderstorms	Severe Thunderstorms. Damaging Hail greater than or equal to 3/4 inches. forecast value XX inches and/or Damaging Winds greater than or equal to 50 kts forecast value XX kts.
5#	Freezing Precipitation	Freezing Precipitation (Any Intensity)
6	Blizzard Conditions	Blizzard lasting greater than or equal to 3 hours. Visibility less than or equal to 1/4 SM and Winds greater than or equal to 30 kts.
7	Heavy Snow	Heavy Snow Accumulation greater than or equal to 2 inches within 12 hrs.
8*	Heavy Rain	Heavy Rain Accumulation greater than or equal to 2 inches within 12 hrs.
9*	Strong Winds ≥ 35 but < 50 kts	Strong Winds greater than or equal to 35 but less than 50 kts forecast value XX kts.
Asterisked items (*) indicate variation from AFMAN 15-129V1 & V2.		
Identified items (#) indicate Severe Weather Action Procedure Criteria (Section 5.8).		

Table A2.3. Observed Weather Warning Criteria.

#	Criteria	Text
1	Lightning (Within 10 NM of the Test Track)	Observed Lightning within 10 NM. of the Test Track.
2	Lightning (Within 5 NM)	Observed Lightning within 5 NM.

Table A2.4. Forecasted Weather Advisory Criteria.

#	Criteria	Text
1	Surface winds ≥ 25 but < 35 kts	Winds greater than or equal to 25 but less than 35 kts forecast value XX kts.

Table A2.5. Observed Weather Advisory Criteria.

#	Criteria	Text
1	Surface temperature > 32º F but < 40ºF	Observed Surface Temperature greater than 32º F but less than or equal to 40º F.
2	Surface temperature < 32º F	Observed Surface Temperature less than or equal to 32º F.

3	Thunderstorms within 25 NM of Holloman AFB	Observed Thunderstorms within 25 NM.
4	Thunderstorms within 10 NM of Holloman AFB	Observed Thunderstorms within 10 NM.
5	Ice FOD (temp ≥ -4º F and < 50º F and dew point within 5º F of the temp)	Observed ICE FOD Conditions.
6	Surface winds sustained ≥ 35 kts occurring in the LFA	Observed Surface Winds sustained 35 kts. Occurring in the Local Flying Area.
7	Light or greater icing in the LFA	Observed Icing Light or Greater in the Local Flying Area.
8	Moderate or greater turbulence in the LFA	Observed Moderate or Greater Turbulence in the Local Flying Area.
9	LLWS on station	Observed Low-Level Wind Shear.
10	Observed Crosswinds ≥ 15 but < 20 kts	Observed Crosswinds greater than or equal to 15 but less than 20 kts.
11	Observed Crosswinds ≥ 20 but < 25 kts	Observed Crosswinds greater than or equal to 20 but less than 25 kts.
12	Observed Crosswinds ≥ 25 kts	Observed Crosswinds greater than or equal to 25 kts.
13	Observed Surface Winds ≥ 31 kts	Observed Surface Winds greater than or equal to 31 kts. Occurring at Holloman AFB.

Attachment 3

WEATHER IMPACT ON UNIT OPERATIONS

Table A3.1. F-16 Fighting Falcon.

CRITERIA	MISSION IMPACT	ACTION
CIG/VIS < 3000 ft / 5 SM	Closes the VFR traffic pattern.	1.Traffic pattern work rescheduled 2. Change to IFR training. Impacts training of ATC personnel.
CIG/VIS < 1500 ft / 3 SM	Stops all VFR operations.	All aircraft require IFR sequencing.
CIG/VIS ≥ 200 ft / ½ SM to < 1500 ft / 3 SM or RVR 2400	Field IFR.	File IFR only.
CIG/VIS < 1500 ft / 3 SM	Stops Cat V flights.	Cat V pilots weather canceled/diverted.
CIG/VIS < 700 ft / 2 SM	Stops Cat IV flights.	1. Cat IV pilots weather canceled/diverted. 2. Cancels student flights.
CIG/VIS < 500 ft / 1½ SM	Stops Cat III flights.	Cat III pilots weather canceled/diverted.
CIG/VIS > 200 ft / ½ SM to < 300 ft / 1 SM	Stops Cat II flights and requires 54th OG/CC approval for Cat I flying operations. Normal training missions canceled.	1. Cat II pilots weather canceled/diverted. 2. Cancels instructor flights. 3. 54th OG/CC approval required to fly Cat I pilots.
CIG/VIS < 200 ft / ½ SM	Stops all flights	All rescheduled/diverted.
Crosswinds ≥ 25 kts	Cancels local aircraft operations	All rescheduled/diverted.
Crosswinds ≥ 20 kts	1. Wet runway: IP Cannot land. 2. Dry runway: Student Cannot land.	Reschedule/divert.
Crosswinds ≥ 15 kts	Wet: Student cannot land	Reschedule/divert.
Sustained winds ≥ 25 kts over water	Cancels normal training missions. Requires 54	All Rescheduled.

	OG/CC waiver approval.	
Surface winds ≥ 25 kts	May cause aircraft damage	Close canopies, remove jacks.
Surface winds ≥ 35 kts to < 50 kts	1. Delays maintenance operations. 2. Cancels normal training missions in any area over 35 kts sustained. Requires 54 OG/CC waiver approval.	All rescheduled/diverted.
Surface winds ≥ 50 kts	Cancels aircraft operations. Control tower evacuated.	All rescheduled/diverted.
Thunderstorms in working area / ranges	Restrict flying in area / ranges.	Reschedule or adjust area for daily flying.
Lightning within 5 NM	No takeoffs. 54 OG/CC approval for landing. All MX personnel clear the airfield.	Suspend all airfield operations.
Hail ≥ ½ inch	Damage to aircraft.	1. Hangar aircraft. 2. Close canopies. 3. Evacuate personnel from flight line before hail starts.
Hail ≥ ⅛ < ½ inch	Damage to skin of aircraft.	1. Hangar aircraft. 2. Close canopies. 3. Evacuate personnel from flight line before hail starts.
Rainfall ≥ 2 inches in 12 hrs	Standing water on runways and taxiways.	Check w/Airfield Mgmt for RCR.
Snowfall ≥ 2 inches in 12 hrs	Ice/snow on aircraft and runway condition changes.	De-ice, check w/Airfield Mgmt for RCR
Freezing Precipitation ≥ Light	Icing on aircraft and runway condition changes.	De-ice, check w/Airfield Mgmt for RCR.
Moderate Icing	Changes aircraft flight characteristics.	Climb or descend only through icing area.
Severe Icing	Changes aircraft flight characteristics.	Flight canceled.

< Moderate Turbulence	Bumpy ride.	Climb or descend through turbulence area.
≥ Moderate Turbulence	Aircraft control difficult.	Restrict flights.
Frost	Changes lift/drag ratio of airfoils.	De-ice aircraft

Table A3.2. T-38 Talon.

CRITERIA	MISSION IMPACT	ACTION
CIG/VIS < 1500ft / 3 SM	Stops all VFR operations.	All aircraft require IFR sequencing.
CIG/VIS ≥ 200 ft / ½ SM to < 3 SM or RVR 2400	Field IFR.	File IFR only.
CIG/VIS < 300 ft / 1 SM	Wing CC approval for flying operations. Normal training.	2. All rescheduled – 54 FG/CC approval to fly.
CIG/VIS < 200 ft / ½ SM	Stops all flights.	All rescheduled/diverted.
Crosswinds ≥ 30 kts	Cancels local aircraft operations.	All rescheduled/diverted
Crosswinds ≥ 20 kts with wet runway	Cancels local aircraft operations.	All rescheduled/diverted.
Crosswinds ≥ 10 kts with ice / slush / snow on runway	Cancels local aircraft operations.	All rescheduled/diverted.
Surface winds ≥ 35 kts to < 50 kts	1. Delays maintenance operations. 2. Cancels normal training missions. Requires OG Commander waiver approval.	All rescheduled/diverted.
Surface winds ≥ 50 kts	Cancels aircraft operations.	All rescheduled/diverted.
Thunderstorms in working area / ranges	Restrict flying in area / ranges	Reschedule or adjust area for daily flying.
Lightning within 5 NM	No takeoffs. OG/CC or 704 TG/CC waiver approval to land. All MX personnel clear the airfield.	Suspend all airfield operations.
Hail ≥ ½ inch	Damage to aircraft.	1. Hangar aircraft.

		2. Close canopies. 3. Evacuate personnel from flight line before hail starts.
Hail ≥ ⅛ but less than < ½ inch	Damage to skin of T-38A.	1. Hangar aircraft. 2. Close canopies. 3. Evacuate personnel from flight line before hail starts.
Snowfall ≥ 2 inches in 6 hrs	Ice/snow on aircraft and runway condition changes.	De-ice, check w/Airfield Mgmt for RCR.
≥ Light freezing precip	Icing on aircraft and runway condition changes.	De-ice, check w/Airfield Mgmt for RCR.
Light rime icing	Changes aircraft flight characteristic.	Climb or descend only through icing area.
> Light rime icing	Changes aircraft flight characteristics.	Flight canceled.

Table A3.3. MQ-1 Predator / MQ-9 Reaper.

CRITERIA	MISSION IMPACT	ACTION
CIG/VIS < 1500 ft / 3 SM	Increased recovery fuel needed.	Reschedule.
Crosswinds ≥ 15 kts (MQ-1) (MQ-9)	Generic maximum allowed limit; touch-and-go training max is 10 kts; asymmetric limit 13 kts.	Reschedule.
Tailwind ≥ 5 kts (MQ-1) / 10 kts (MQ-9)	Takeoff limit.	Reschedule.
Gust Spread > 20 kts	No takeoffs or landings	Reschedule.
Surface winds > 30 kts sustained	Impacts ground speed, must be avoided or mitigated as best as possible.	Reschedule.
Wet/Ice RCR ≤ 5*	No takeoffs or landings.	Reschedule.
Thunderstorms / rain, drizzle, or virga: few or greater in coverage which can't be avoided	Avoid areas of TS/Rain, Drizzle or Virga In addition, cannot operate within 25 NM of Thunderstorms.	Reschedule, recover, adjust operating area or obtain waiver.
Liquid, freezing or frozen precipitation	No takeoffs or landings with	Reschedule.

	Hail, Moderate Rain or freezing precipitation.	
≥ LGT icing	No takeoffs or landings in known areas of icing.	Reschedule.
≥ 6500 ft density altitude (DA)	Causes lack of sufficient thrust; must reduce weight in higher DA values.	Reschedule.
≥ MDT turbulence	May operate in forecast areas of turbulence, but not if observed.	Reschedule or adjust flying area.
Winds aloft ≥ 80 kts	Aircraft control compromised.	Reschedule or adjust flying area.
< 50% - broken ceiling	Cameras can't see below or through.	Reschedule or adjust flying area.
Thick dust or smoke	All cameras unusable.	Reschedule or adjust flying area.
Surface winds > 39G52 kts forecast	Cancels aircraft operations.	Reschedule.
< 40°F or > 95°F	Impacts launch/recovery; engine may be too cold or overheat.	Reschedule or adjust flying area.

Table A3.4. GR-1 Tornado.

CRITERIA	MISSION IMPACT	ACTION
TACAN 16 (400ft / 1-1/4SM)	Restricts approach on runway 16.	Divert or reschedule.
TACAN 34 (400ft / 1-1/4SM)	Restricts approach on runway 34.	Divert or reschedule.
TACAN 22 (600ft / 1-1/2SM)	Restricts approach on runway 22.	Divert or reschedule.
Surface winds > 40 kts, sustained or gusts	No takeoffs or landings.	Divert or reschedule.
Crosswinds > 35 kts	No takeoffs or landings.	Divert or reschedule.
Thunderstorms	Restricts flying area, no takeoff or landing if at airfield.	Adjust flying area, avoid by 10 NM, divert.
Severe icing	No operations in area.	Reschedule or adjust flying area.
A/R track visibility < 5 km (3.1 miles)	Restricts aerial refueling.	Reschedule or adjust A/R Track.

Table A3.5. QF-4E Phantom drone.

CRITERIA	MISSION IMPACT	ACTION
CIG/VIS < 3000 ft / 5 SM	Limits the VFR traffic pattern.	Refer to HAFBI 11-250.
CIG/VIS < 1500 ft / 3 SM	Stops all VFR operations Stops unmanned operations.	All manned aircraft require IFR sequencing.
CIG/VIS ≥ 300 ft / 1 SM to < 1500 ft / 3 SM	Field IFR.	File IFR only.
CIG/VIS < 300 ft / 1SM	Stops Manned Flying.	Mission's weather canceled/diverted.
Sustained winds ≥ 15 kts	Stops unmanned operations.	Reschedule.
Crosswinds ≥ 25 kts All runways	Cancels local aircraft operations.	All rescheduled/diverted.
Surface winds ≥ 25 kts	Cancels normal training missions in any area over 35 kts sustained.	All rescheduled/diverted.
Surface winds ≥ 50 kts	Cancels aircraft maintenance operations.	All rescheduled/diverted.
Thunderstorms in working area / ranges	Restrict flying in area / ranges.	Reschedule or adjust area for daily flying.
Lightning within 5 NM	No takeoffs. SOF approval for landing. All MX personnel clear the airfield.	Suspend all airfield operations.
Hail ≥ ½ inch	Damage to aircraft.	1. Close canopies. 2. Evacuate personnel from flight line before hail starts.
Rainfall ≥ 2 inches in 12 hrs	Standing water on runways and taxiways.	Check w/Airfield Mgmt for RCR.
Snowfall ≥ 2 inches in 12 hrs	Ice/snow on aircraft and runway condition changes.	De-ice, check w/Airfield Mgmt for RCR.
Freezing precipitation / frost ≥ light	Icing on aircraft and runway condition changes.	De-ice, check w/Airfield Mgmt for RCR.
Moderate icing	Changes aircraft flight characteristics.	Minimize flight through icing area.

Severe icing	Changes aircraft flight characteristics.	Flight canceled.
≥ Moderate turbulence	Aircraft control difficult.	Restrict flights.

Table A3.6. UH-1 Iroquois.

CRITERIA		MISSION IMPACT	ACTION
Surface winds > 30 kts		No takeoffs or landings.	All rescheduled / diverted.
Crosswinds > 25 kts		No takeoffs or landings.	All rescheduled / diverted
Thunderstorms		Restricts flying area, no takeoff or landing if at airfield.	Adjust flying area to avoid, divert.
Icing > light		No operations in area.	Reschedule or adjust flying area.
Turbulence > moderate		No operations in area.	Reschedule or adjust flying area.

Table A3.7. UH-60 Blackhawk.

CRITERIA	MISSION IMPACT	ACTION
Temperature < -54° C or > +50° C	No takeoffs or landings.	All rescheduled/diverted.
Surface winds > 45 kts	No takeoffs or landings.	All rescheduled/diverted.
Thunderstorms	Avoid by 20 NM, restricts flying area, no takeoff or landing if at airfield.	Adjust flying area to avoid, divert.
SVR icing	No operations in area.	Reschedule or adjust flying area.
SVR turbulence	No operations in area.	Reschedule or adjust flying area.

Table A3.8. AFRL ARC Program Operations.

CRITERIA	MISSION IMPACT	ACTION
Winds ≥ 12 kts	No-Go	Reschedule test
Light precipitation	No-Go	Reschedule test
Visibility < 3 SM	No-Go	Reschedule test
Cloud ceiling < 3000 ft	No-Go	Reschedule test
Light turbulence	No-Go	Reschedule test
Light icing	No-Go	Reschedule test
Thunderstorms w/in 5	No-Go	Reschedule test

SM		
Additional criteria dependent on test aircraft		

Table A3.9. Maintenance Activities.

CRITERIA	MISSION IMPACT	ACTION
Any weather watch		Increase awareness and plan for possible adverse weather conditions.
Weather warning of winds (gusts or sustained) $\geq$ 35 kts	Potential damage to aircraft.	1. Ensure all actions in previous weather conditions are complied with. 2. Hangar doors will remain closed except to remove/shelter aircraft, AGE or munitions, and during re/defueling operations. 3. Discontinue all egress maintenance outside of sheltered areas. 4. Remove all non-powered AGE from open ramp areas. Powered AGE will be removed from open ramp areas at the discretion of the MXS Superintendent. 5. Munitions up/down load may occur only on aircraft in authorized hangars with shelter doors closed. 6. Discontinue AGE refueling operations. 7. No outside munitions pickups or deliveries will be made without approval from 49 MXS/MXM or 49 MXS/MXMW.
Observed weather	Stop hotpit refueling	All aircraft refueling

advisory of sustained winds > 35 kts	activities.	operations (Except in-shelter refueling) will be stopped upon MOC's verification of ACTUAL wind speed of sustained 35 kts or greater.
Weather warning of winds ≥ 50 kts or hail ≥ ¾ inch	Potential damage to aircraft.	1. Ensure all previous weather conditions are complied with. 2. Hangar as many aircraft as possible (especially if hail is forecast). The 49 WG aircraft will utilize 49 WG facilities to include the hush houses and fuel barns. 3. Park all remaining aircraft into the wind and moor. 4. Remove all miscellaneous items, to include AGE, from open ramp areas and terminate all outside aircraft maintenance. 5. Hangar doors will remain closed. 6. Terminate all outside munitions operations. 7. All aircraft refueling operations will be stopped.
Weather advisory of lightning within 25 NM	Potential damage to aircraft.	Be prepared to decrease maintenance activities.
Weather advisory of lightning within 10 NM	Potential damage to aircraft.	1. Terminate egress system maintenance outside sheltered areas. 2. Close canopies and secure panels on aircraft parked outside. 3. Terminate open fuel

		cell maintenance and secure access panels.
Weather warning of lightning within 5 NM	Potential damage to aircraft.	1. Evacuate personnel from locations containing explosives that could be initiated by lightning. Minimum required personnel may remain to carry out an urgent operational mission. 2. Discontinue all munitions actions. Within the munitions storage area (MSA), the Munitions Section Chief or Munitions Control will order evacuation when considered necessary. 3. Discontinue all avionics and NDI section operations. Power down all back shop avionics and NDI operations. 4. Personnel will be evacuated from these locations: 4.1. Explosive locations (excluding those licensed by AFMAN 91-201, *Explosive Safety Standards*, paragraph 2.35.), operating buildings, open storage sites, or loading docks without approved lightning protection systems, which contain explosives. 4.2. Facilities containing exposed explosives, explosive dust or vapor, or unpackaged

		electrically initiated explosive devices (even if equipped with approved lightning protection systems). 4.3. Parked explosive laden vehicles. 4.4. All locations within public traffic route of facilities and carriers listed above. 5. When evacuating buildings containing explosives, staff operations requiring constant attention will be manned by the minimum number of personnel required until it is safe to leave. 6. Stop aircraft explosives loading, unloading, or preload operations at the same time fueling and defueling operations are suspended. 7. All fuel servicing and POL and/or fuel related maintenance activities (including LOX servicing) will cease. 8. Terminate all vehicle and AGE fueling and defueling operations. 9. Ensure all personnel are off the open ramp areas. 10. NDI will power down X-Ray, Magnetic Particle Machine, and Oil Analysis Spectrometers.
Heavy snow or freezing precipitation	Potential damage to aircraft.	1. Ensure all aircraft canopies and panels

warnings		are closed. 2. Ensure all shelter doors are closed, except for removal/sheltering of aircraft, AGE, munitions, and re/defueling of aircraft. 3. All aircraft towing and vehicular movement will be held to a minimum. 4. Installed aircraft engine maintenance runs will be held to a minimum.

Table A3.10. 49 CES/CEF.

CRITERIA	MISSION IMPACT	ACTION
Lightning within 5 NM warning	Threat to personnel.	Curtail outside activity and have personnel remain indoors until the weather advisory is lifted.
Lightning within 10 or 25 NM	Threat to personnel.	Consider limiting outside activities.
Hail	Threat to personnel and vehicle damage.	1. Move vehicles and equipment inside the stations to prevent possible damage. 2. Consider limiting outside activity to mission-essential actions.
Tornado Watch	Threat to personnel and vehicle damage.	1. Consider resource dispersal or sheltering of vehicles and equipment. 2. Consider restricting outside activities to mission-essential tasks only. 3. Establish 100% accountability of personnel. 4. Consider ECC relocation during a

		"Watch" to reduce imminent danger to ECC Operators.
Tornado Warning	Threat to personnel and vehicle damage.	1. Alert personnel to immediately seek shelter. 2. Remain sheltered until proper authorities declare "All Clear". 3. Conduct a PAR report. afterwards and report status to the ECC and SFO.
Winds ≥ 50 kts	Threat to personnel and vehicle damage.	Evacuate Emergency Communications Center to Fire Station #2.

Table A3.11. 49 MDG.

CRITERIA	MISSION IMPACT	ACTION
Severe Weather (Tornado, Winds ≥ 50 kts, or hail ≥ ¾ inch)	Threat to personnel.	1. Cease ambulance operations. 2. Activate MCC upon MDG/CC direction. 3. Stay away from windows and glass doors. 4. Limit outside movement 5. Move personnel to center of building.

Table A3.12. 49 SFS.

CRITERIA	MISSION IMPACT	ACTION
Lightning, tornado, winds ≥ 50 kts, or hail	Threat to personnel and vehicle damage.	1. Relocate boundary sentries to solid structure. 2. Mobile patrols park in sheltered area. 3. Wear PPE when out of shelter.